



Homestar v5

Scoping Paper: Exec Summary



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About NZGBC

The New Zealand Green Building Council (NZGBC) and its members and supporters are a team of passionate advocates for better buildings, because we know that better buildings mean healthier, happier Kiwis. The NZGBC is a not-for-profit industry organisation that represents more than 520 companies and organisations, including government departments, banks, energy companies, insurers, property and construction companies, architects, developers, designers and tertiary education institutions. This includes many of the NZX50. These members have a combined market turnover of \$20 billion. We also work with local government members, representing over 60% of New Zealand's population

Our vision is that every home and building in Aotearoa is green and sustainable. The NZGBC works towards this vision by providing education for hundreds of New Zealanders every year keen to learn about the technical aspects behind better buildings, and advocating to government and industry for policies and practices that encourage sustainable buildings. We also run a suite of trusted, robust authentication schemes for homes and buildings; Homestar, HomeFit, Green Star and NABERSNZ. These rating systems are influential drivers in the transformation of Aotearoa's built environment.

About Homestar

Homestar was first launched in 2011. From its inception it has been a holistic sustainability rating tool, covering a wide range of environmental and social issues from energy consumption and health, to local environmental impacts such as stormwater run-off.

Homestar has been regularly reviewed and updated, with version 4 of Homestar released in 2017. Homestar v4 has been the most successful version yet, with nearly 3,500 registrations in the past year, bringing total registrations to nearly 5,000 since v4 was first launched.

With the uptake of Homestar increasing, there is a powerful opportunity to influence change across the housing sector. We are looking forward to working with you – our stakeholders and supporters – to come up with the best solutions for Homestar v5. The following sets out some of the challenges and solutions we are exploring:

- The need to simplify the process. We are setting out steps to make the assessment process easier. Clearly though, any simplification needs to be balanced with ensuring better outcomes.

- The proposed changes make clearer the relationship between energy performance and the Star rating, better communicating to homeowners the energy and/or comfort benefits of the different rating levels.
- The holistic nature of Homestar is also not as clear as it could be. The changes proposed set out to homeowners how Homestar benefits them, but also benefits the wider environment.
- The 'Zero Carbon' Act sets Aotearoa New Zealand on a pathway to zero carbon. As a result, there is increasing likelihood that Government will further regulate the built environment and Homestar needs to reflect and stay ahead of this.
- There is a growing focus on embodied emissions, which NZGBC acknowledges are important. We are proposing that Homestar should give recognition for projects that measure and account for these emissions.
- Homestar needs to keep up with building code changes. As an example, Acceptable Solutions G4 of the building code was updated in 2019 to require mechanical kitchen and bathroom extract. As is standard with our tools, once they become regulated these elements come out of tools.
- Longer term, the building code could set out a trajectory to make homes progressively lower carbon. The goal is to have Homestar show the way beyond the minimum requirements of the building code to what the future could look like.

Influences and drivers

We know that buildings and the built environment have a role to play in the response to some of the biggest issues faced by our country and the world, including climate change, urbanisation, poverty, equity and human rights, health and well-being.

Homestar, along with HomeFit, Green Star and NABERSNZ, continue to evolve to meet these challenges and to respond to both international and domestic influences and policies.

Internationally, the 2015 Paris Agreement spurred global action on climate change, and the release of the United Nations Sustainable Development Goals (SDGs) sparked a growing commitment to achieving better outcomes across a range of sustainability metrics.

New Zealand is a signatory to the Sustainable Development Goals and the Zero Carbon Act has recently been passed. But there are other challenges Aotearoa is facing. Many of our cities are facing water shortages. Much of the waste going to landfill is construction and demolition waste. There is an urgent need to adapt to heavier rainfall events caused by climate change.

Homestar has a part to play in limiting global warming to less than 2C. Beyond emissions, Homestar can help improve the well-being of our community and aligns with at least 11 of the 17 SDGs. For more information about Homestar and the SDGs, [please see this infographic](#).

At home in New Zealand, a range of policies and initiatives shape the environment in which homes and buildings are delivered, as well as our approach to reducing emissions. Homestar has an important role to play in helping New Zealand meet its ambitious policy goals and commitments.

Evolving Homestar

More and more homes are being certified to the Homestar standard, so now is a good time to further improve the tool to align with the sector's needs and drive healthy sustainable outcomes. This consultation and review process aims to better understand the challenges and limitations of the rating tool and how they impact our stakeholders. We are proposing a set of amendments to ensure Homestar is ready for the 2020s and aligns with the goal of a lower carbon, healthy Aotearoa. We want your input on these changes and other steps that can be taken.

The proposed key amendments are:

- 1. Make it clearer to householders what Homestar can do for them and how the Star rating links to the energy efficiency of the home.**

Homestar can be broadly divided into measures that directly benefit people in the home, such as lower energy consumption and running costs and a warmer home, and those that have wider environmental benefit such as reduced pollution and carbon emissions.

Homestar v5 offers us the opportunity to simplify the categories and to be clearer about what the tool covers.

Three possible new categories covering benefit to the occupant would rate the home as:

- Energy Efficient
- Healthy and Warm
- Designed for People.

The first two categories are self-explanatory. The third one, Designed for People, would cover items of good design and home-location such as Inclusive Design (EHC-10), Security (MAN – 1) and Neighbourhood Amenities (STE – 3).

A fourth category, Caring for Nature, would cover wider environmental benefit including stormwater run-off and construction waste

Comfort and running costs are of paramount importance to potential home purchasers, and the current Star rating does not offer a clear picture of this. Homestar v5 provides an opportunity to put more emphasis on how Star ratings relate to a home's energy efficiency and likely thermal comfort compared with a typical (2020) Building Code compliant home.

We are considering setting a clear minimum energy standard for each Star level of Homestar, displaying energy data alongside each Star level, and introducing Energy Labels.

2. Using technology to make using Homestar simpler for assessors

NZGBC is committed to making the Homestar certification process as easy as possible. We acknowledge that the current process is still relatively manual and involves the use of multiple forms, checklists and calculators.

After recent success using a WebApp for HomeFit, we are considering the business case for investment into a Homestar App. We will also be providing a pilot energy modelling tool (to be launched later in the development of v5) to standardise, and simplify, the energy assessment process.

3. Aiming to improve ventilation and reduce summertime overheating

Evidence suggests that the best ventilation outcomes (reduced humidity levels and other pollutants) come from the use of whole-house mechanical ventilation systems. As these are not commonly installed in New Zealand homes, mandating their use would be a big step. However, Homestar needs to continue to push homes towards the best possible outcomes so we are looking at how mandating whole-house systems could be introduced at higher Star levels.

The current methodologies within Homestar for calculating summer cooling and overheating have limitations and gaps. The NZGBC is considering a separate comfort credit for summer cooling and overheating. We would also like to hear whether you think we should make assessment of overheating mandatory at all levels of Homestar.

4. Explicit recognition of net zero

Homestar is a driver of carbon policy for new homes. With Homestar v5 we want to make the link between the Star rating and overall emissions reduction clearer.

One possible method of reinforcing the link between the Star rating and energy/carbon emissions is to set maximum space heating/cooling demand AND overall carbon emissions for each Star rating.

We also think it would be beneficial to combine all the energy-related credits into one overall energy credit (a new EHC-2) supported by an easy-to-use calculator. This will clarify the effect of holistic design choices on energy consumption, running costs and carbon emission.

Introducing Energy Bandings for Homestar would provide the opportunity for awarding an energy label as part of the Homestar certificate. The NZGBC would like to see a national energy/carbon label for homes much like the energy labelling for appliances (A-G) that already exists in New Zealand. This is common in Europe and Australia has a similar label.

We are also proposing mandatory minimums for Star ratings which would include minimum carbon emissions. This would increase the level of surety around what a Star rating means in practice and help put Homestar on a path to net zero.

Your opportunity to have input

Homestar is about putting New Zealand on a trajectory to lower carbon, healthier homes. Developers, government, retirement providers and others are building thousands of homes to Homestar already.

We want to ensure we capture your thoughts about how Homestar can be further improved. Let us know your thoughts [here](#).

For the full discussion of the technical changes that Homestar v5 will bring, and for further opportunities to provide targeted feedback, please see [the supporting document](#).

What's next?

Executive Summary and Homestar v5 consultation paper released. 16 June 2020

Feedback due 17 July 2020